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ABSTRACT

This booklet provides a succinct guide to effective management procedures, including whether and how to take on projects, estimation of costs prior to project bids, project management tools, case studies, and practical exercises for staff development activities. Chapter 1 investigates why institutions take on projects, issues involved, benefits projects bring, and importance of initial project management. Chapter 2 highlights the need for effective estimation of costs prior to submitting the project bid and discusses the need to include objective performance criteria in bids to assess the success of the project. Chapter 3 explores issues related to time management and the formation of project teams and identifies the concept of "single point accountability" and some benefits. Chapter 4 identifies project management software available and points to websites that have evaluation copies available to download. It provides an overview of the PRINCE (PRINCE 2) project management standard and links to related Web sites. Chapter 5 provides six case studies that highlight the positive effects that small-scale projects can have on education and training institutions. Chapter 6 contains practical activities that can be used by individuals to reinforce the information in each chapter or as staff development activities. (YLB)

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Practical project management

for education and training

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Practical project management

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Preface

Although project management has been going on for thousands of years, the practice has only recently been recognised as a discipline in its own right
Lewis, 1997: vii

During the past decade there has been substantial growth in the number and complexity of 'projects' undertaken by education and training institutions. Large-scale European projects have been used to:

- develop models for the education and training of people in the workplace
- introduce new technology
- develop flexible credit accumulation and transfer models
- produce multimedia learning materials
- investigate new and innovative support mechanisms.

Increasingly, education and training institutions are becoming the testing ground for innovative support methodologies using new technology. This trend is set to continue, and it is becoming increasingly important that projects are seen as an integrated part of any education and training institution's core 'business'.

The undertaking of large- and small-scale projects impinges upon the normal operation of any institution. If successful, some projects will have a long-lasting and profound effect, not just locally but throughout Europe.

All the above puts pressure upon an already pressurised group of senior/middle managers and those staff seconded to undertake specific projects. Most education and training institutions do not employ dedicated project managers or teams when they take on projects, and the management of the project is still a matter of allocation, delegation or, sometimes, bad luck.

Some institutions are, however, looking at the reasons why projects are being undertaken and the overall benefit they will bring to the institutional planning process. A few are bringing in external project managers and teams in order to limit the disruption to normal operation.

Projects will continue to form a large part of education and training institutions' work. We should all be grateful for the hard work and dedication shown by large numbers of staff who are working to produce transferable models of good practice for the benefit of the education and training sector.

I wish you all success with your individual projects and hope you find some of the information contained in this publication useful. Links to sites relevant to project management are provided on the FEDA website (*www.feda.ac.uk*). Readers can also download the interim and final reports of the 1997–99 Quality in Information and Technology (QUILT) college-based project reports.

Bill Lockitt

Overview

Projects undertaken by education and training institutions do not have the same focus as those in business and industry. However, they are vitally important for the success of individual institutions, and the education and training sector as a whole.

This publication focuses on effective management procedures that have been identified as part of the QUILT college-based projects of 1997–99. It is mainly concerned with projects that develop information and learning technology (ILT) and information communications technology (ICT). However, a number of the issues discussed are relevant to 'general' project management.

Chapter 1 investigates why institutions take on projects, the issues involved, the benefits projects bring and the importance of initial project management.

Chapter 2 highlights the need for effective estimation of costs prior to submitting the project bid. This is an important process and can only be achieved by someone who has had previous experience of a range of projects, or in institutions where costs are known and procedures set out for those making project bids. This chapter also discusses the need to include objective performance criteria in bids, to assess the success of the project.

Issues related to time management and the formation of project teams are explored in **Chapter 3**. The concept of 'single point accountability' is discussed and some of the benefits identified.

Selecting project management software is an individual/institutional process. **Chapter 4** identifies some of the software available and points to sites that have evaluation copies available to download. The PRINCE (PRINCE 2) project management standard is a commonly used method of managing technology-related projects; the chapter provides an overview and links to websites.

A number of case studies, taken from the 1997/98 QUILT projects, are provided in **Chapter 5** in order to highlight the positive effects that small-scale projects can have on education and training institutions.

Each chapter has associated practical exercises, which can be used by individuals to reinforce the information in that chapter or as staff development activities. These form **Chapter 6**. The practical activities and QUILT project reports are also available from the FEDA website (*www.feda.ac.uk*).

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Identifying the costs, benefits and relevance of projects

1

What is a project?

In its modern form, project management is a relative newcomer to the management scene. Business and industry started to see the benefits of efficient project management in the early 1960s, but the origins of project management can be traced back to the early 19th century, when large-scale 'projects' – the building of railroads, canals, ships, etc. – were being undertaken. Managers of these projects faced new problems; they had to deal with large numbers of workers, complicated elements that needed to be completed in sequence, and the logistics of moving workers and resources, for example.

Frederick Taylor (1856–1915) undertook a detailed study of work, which showed that it could be broken down into elementary parts and that those elements could be planned and built into the production process.

Henry Gantt (1861–1919), an associate of Taylor, studied the elementary parts in greater detail. One outcome of his work was the introduction of the Gantt chart, which highlighted the sequence and duration of all tasks that in total formed the project. The Gantt chart proved so successful as a project management tool that it remained unchanged for almost 100 years; only recently were links added to show the interdependence of tasks.

Other tools have recently been introduced, such as project evaluation review technique (PERT) charts and critical path analysis, which have improved the scientific approach to project management.

Types of project

Dennis Lock, in *The essentials of project management* (1996: 6), states that projects can be classified under four main headings:

- civil engineering; construction; petrochemical; mining and quarrying
- manufacturing
- management
- research.

This publication puts forward the case for a fifth classification:

- education and training.

Planning projects in education and training

Projects undertaken in education and training environments differ from those undertaken in business and industry, partly because of the amount of dedicated project time available.

Although many education and training environments are open for most of the year, some periods are typically unavailable for anything other than education and training. When undertaking a project in education and training environments it may be worth assuming that there will be the following 'gaps':

- September: three weeks for enrolment and preparation
- December: two weeks for holidays
- April: two weeks for holidays
- June: two weeks for those involved with exams
- August: six weeks for holidays (different people at different times).

If the above are taken into consideration, most 12-month projects undertaken in education and training environments will have a maximum of 37 weeks in which to meet the agreed performance criteria. The project team must make the most of this time by planning the project well in advance of the start date, and by ensuring that all resources and staff are available before that date.

Why take on a project?

Senior management must ask a number of strategic questions before undertaking a project, as even small projects impinge upon an institution's normal working practices. Critically, does the project support the institutional aims and objectives? This question should determine whether or not the project is undertaken.

Assuming that the institution has an 'ILT/ICT strategic plan', a project that does not fit into that plan is often seen as being detached from 'normal' activity. Such projects are rarely integrated into the institution and are often seen as 'extras' rather than normal practice.

There may be occasions when projects that do not support the institutional plan are taken on. For example, technology is constantly changing and may overtake the institutional plan. A project trying to integrate new technology or delivery methodologies may be used to gather data that can inform college management regarding future institutional planning.

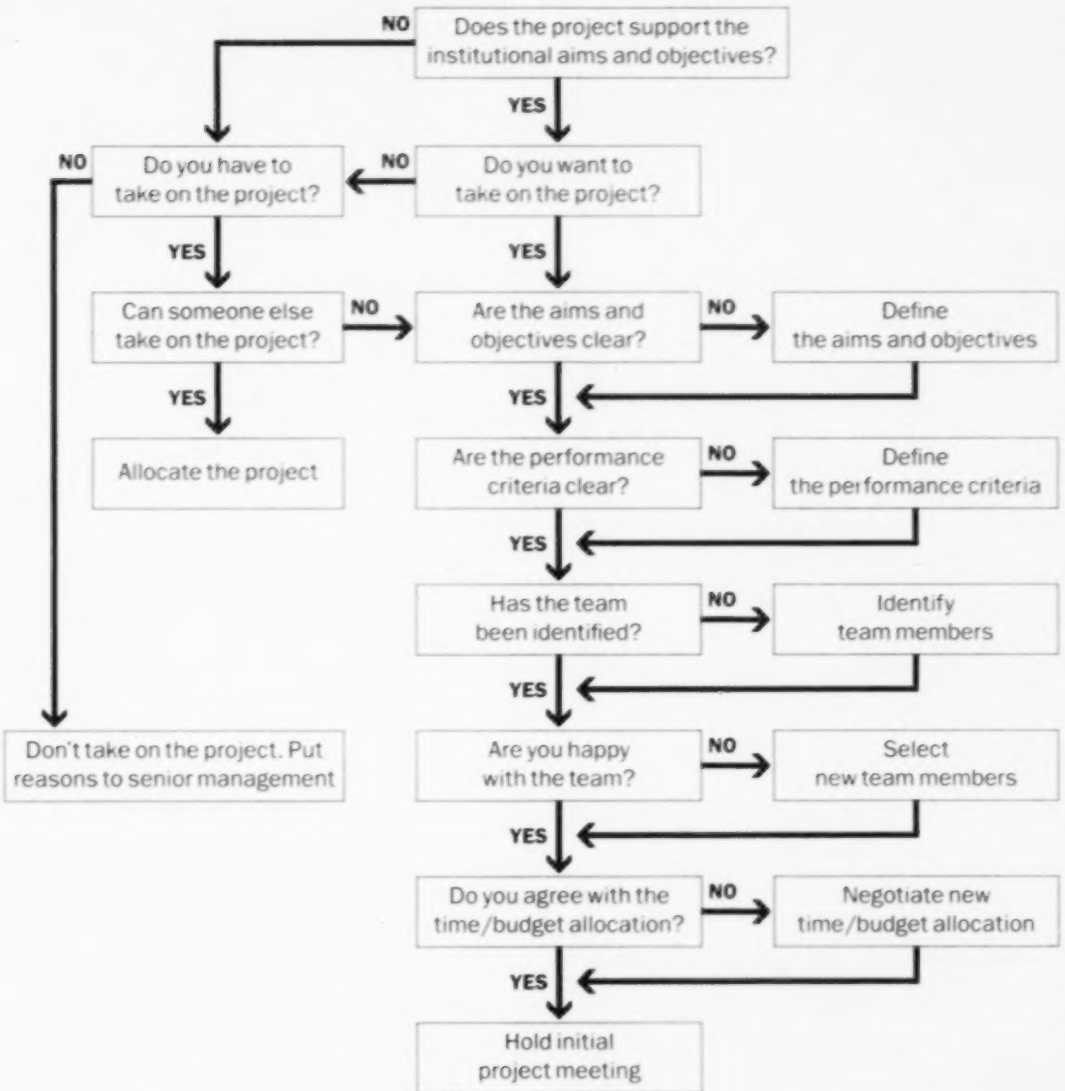
A report by the Higher Education Funding Council for England (HEFCE, 1998) has identified some of the main points management need to consider before undertaking projects of this type:

- ILT/ICT development should be driven by educational needs, not the technology
- the full costs of ILT/ICT development need to be identified
- an ILT/ICT strategic plan that supports the college mission statement and institutional plan needs to be developed
- the strategic plan should have achievable aims and objectives in the short, medium and long term
- objective performance criteria and service level agreements (SLAs) should be used to achieve the strategic aims and objectives
- the strategic plan should be driven by a strategy planning group, which must have the support of senior management and have cross-sectional representation
- 'champions', who should be competent in project management and have ILT/ICT awareness (and skills if possible), need to be identified to drive specific developments
- ILT/ICT staff training needs to be provided just before or as the developments take place; if training is provided too early or too late, it will be wasted
- financial systems need to be developed that inform the college management of what is being spent, how it is being spent and the returns that are expected on the investment

- existing good practice within the institution should be supported
- staff should be encouraged to undertake recognised ILT/ICT qualifications
- a staff ILT/ICT audit needs to be undertaken to identify existing skills and to plan an ILT/ICT staff development programme.

Project managers may wish to comment on and rank-order the items on the above list (and other lists throughout this publication). They may also find Figure 1 a useful starting point when considering whether to undertake a project. Sometimes they may have no choice in the matter, but they should still try to influence the project aims and objectives, performance criteria, team membership and budget. Remember that the final results of the project will be accredited to the project manager. Potential project managers need to be actively involved at the very start of the project if they are to have any influence in the systems and structure used.

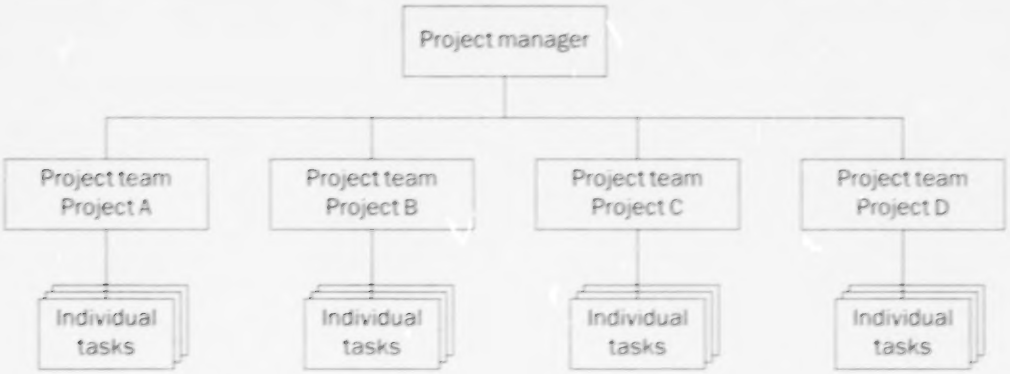
Figure 1 Why take on an ILT/ICT project?



How do projects affect the organisation?

Education and training organisations are unlikely to have dedicated project teams of the sort shown in Figure 2, a model showing a project manager with overall control of the project and the project team. The manager and team members are focused on one particular project and stay together until it is completed.

Figure 2 Project management and team relationships in large-scale projects



This model may be practical and cost-effective with large projects, where the team is disbanded at the end, but it has little relevance to education and training environments (with the exception of some large-scale, European-funded projects). Many projects undertaken in education and training are too small to warrant such expense. Even if a team were set up specifically for a single project, who would replace them in the learning environment? Where would they go once the project was completed?

An education and training organisation's projects are likely to operate a model similar to that shown in Figure 3. Here, identified personnel may be working on a number of projects at the same time (while, in many cases, still having a substantial teaching/training commitment).

Figure 3 Project management and team relationships in most projects undertaken by education and training organisations

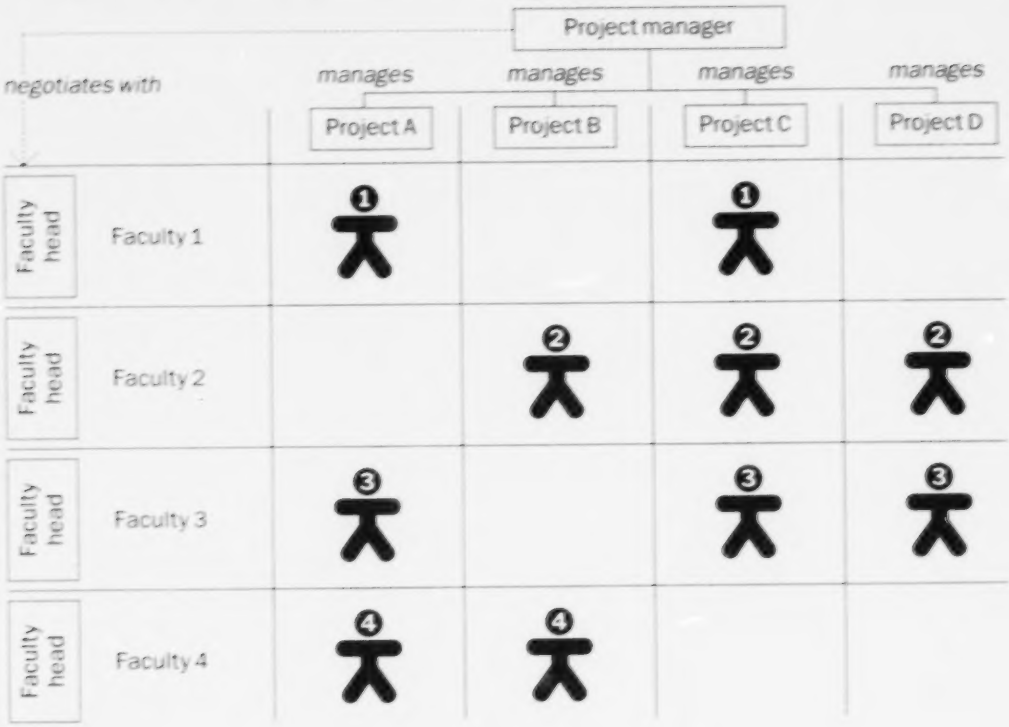


Figure 3 shows how the project manager may be handling a number of projects, including teaching commitment, at the same time. Project time and personnel need to be negotiated with individual heads of school/faculty. Equally, team members may also be working on a number of projects, including teaching/training, at the same time. Project team members working to this model may be asked to undertake projects that cause a conflict of interest. The project manager must be aware of this from the start of the project, and must take action to limit any conflict.

The project manager and team members are expected to move from project to project, completing old and starting new. This model requires a great deal of planning and organisation from a competent project manager, and the outcomes from the project(s) need to be directed by service level agreements between the project manager and team members.

Duties of the project manager

The main purposes of project management are to ensure that a project is completed successfully and to anticipate any problems that may arise during it. Before embarking on a project, the project manager will also take into consideration the resources, staffing, budget allocation and other factors that could affect the project outcomes.

Good project management occurs when all these factors are pulled together and the project is completed successfully. A wide range of project management tools and resources now exists, and a good project manager will be able to evaluate them and select 'the right tools for the job' (see Lockitt, 1999). A project manager should:

- be accountable for the project's day-to-day management
- pick, or be involved in the selection of, the project team
- agree reporting procedures and the people accountable
- prepare the project action plan
- define the team members' responsibilities
- set performance criteria, reporting procedures and an action plan for individual team members
- monitor the project's progress on a regular basis
- report any issues to senior management as soon as possible
- resolve issues as soon as possible
- ensure that the project is completed within budget
- make management and others aware of the project's benefits
- deliver the project outcomes on time
- ensure that all performance criteria have been achieved before closing the project
- evaluate the project
- produce a final report to senior management, identifying any issues that occurred during the project and any 'transferable models' that could be used to manage similar projects in the future
- market the project outcomes to those who would benefit.

What makes a good project manager?

The QUILT college-based projects highlighted four characteristics of a good project manager:

Energy

Project managers are expected to enthuse the project team, lead them to a successful outcome, act as a buffer between the team and senior management, and communicate effectively at all levels. The energy shown by individual project managers and team members was noted several times during the QUILT projects. In a number of cases the projects were only successful due to the energy, enthusiasm and persistence of the project manager and team members.

Ability

Project managers need to have curriculum experience and a range of management skills. Projects involving ILT/ICT also require considerable awareness of new technology, or the ability to manage ILT/ICT 'experts' and to evaluate their inputs.

Vision

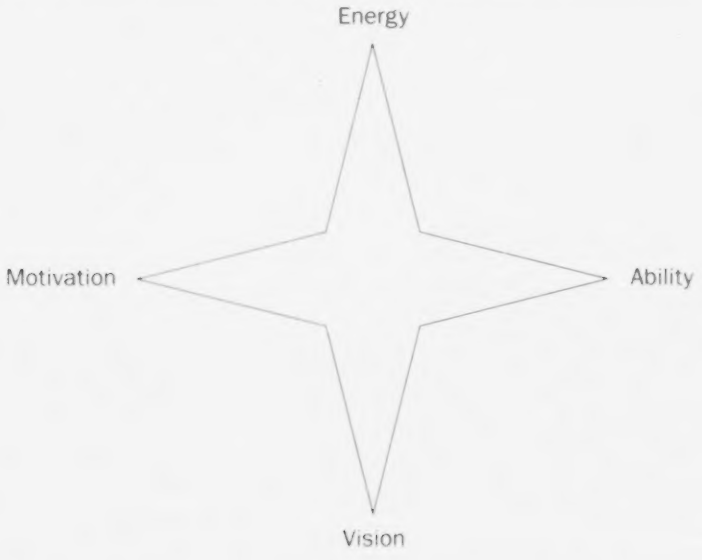
Successful project managers have the ability to project their ideas into the future, evaluate the consequences and suggest ways of achieving the desired outcomes. Some do this naturally and consider themselves fortunate when things go right; they may find on further analysis that success was the result of an 'intuitive' action they undertook at an early stage of the project. Project managers should review both successes and failures, and try to identify the characteristics that led to each.

Motivation

Project managers in education and training environments have stated that it is not just financial or professional reward that motivates them. A number of successful projects have been undertaken with limited funding; the motivating factor has been the benefit the project has had for both learners and colleagues. It is important to have project managers who are motivated, and who keep this motivation throughout the project.

> *The purpose of project management is to foresee or predict as many of the dangers and problems as possible and to plan, organise and control activities so that the project is completed as successfully as possible in spite of all the difficulties and risks.*
> Lock, 1996: 1

Figure 4 Characteristics of a good project manager



Developing the systems

2

Estimating the costs of the project

The task of establishing a project's actual cost should be undertaken by:

- individuals or teams with past experience of project management
- teams of project management experts
- members of senior management
- finance officer(s)
- outside consultants
- individuals or teams following a pre-defined costing.

If a project's cost is not estimated correctly, the project can be jeopardised before it even starts. It is very difficult to get people enthusiastic about an underfunded project, and an experienced project manager and team may refuse to become involved if they feel that the project is not seen as a priority area.

An experienced project manager or senior manager should be involved in the costing of projects. This experience should be disseminated through the institution where possible. Issues that need to be considered include:

- How big is the project being planned?
- Who should be responsible for undertaking the project's costing?
- What are the 'real costs' – does the institution have a list of recommended costs for staff and resources?
- Have there been any past projects of comparable size and complexity?
- Does the organisation 'top-slice' income?

Once these have been answered, the project manager should:

- obtain details of any comparable past projects
- use these past projects as a guide to the first estimate
- keep the project outcomes and costs within realistic and achievable targets
- establish the overall cost of the project
- break the costs down into project phases if possible
- keep track of the actual costs and learn from experience.

Managing the budget is an essential part of project management. Even the most successful project in terms of outcomes will attract criticism if the allocated budget has been exceeded. The project manager must have control of the budget and provide the final authorisation for any expenditure.

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This is not to say that budget responsibility cannot or should not be allocated to identified members of the team, but the project manager must be aware of the consequences if the allocated budget is exceeded. If budget responsibility is allocated to members of the project team, all team members should use a common accounting framework, and the project manager should ensure that all are aware of this framework, how to use it and their individual limits and responsibilities.

Developing a project's financial plan is an individual process, but the following points may be helpful when considering areas to include:

- the overall budget
- a breakdown of costs for the project's individual stages
- the funding allocated to identified members of the team (if allocated)
- who has authorisation and for how much
- the reporting procedures
- the on-going report dates throughout the project
- the implications if the budget is exceeded.

Most education/training projects are not intended to produce a financial profit. If they *are* intended to be profitable, information on income will also be required. Although software is available for accounting purposes, it makes sense to keep the accounting process as simple as possible; software should only be used if all the people responsible for the budget are fully conversant with it.

Selecting the project team

Very few education and training projects have a dedicated project manager or team members; instead, they are normally managed by senior managers. These managers have both a teaching commitment and managerial responsibilities, many of which may conflict with the project. Team members will, in the main, have a full teaching commitment and may be involved in other projects; again, much of what they do will conflict with any new project.

To make projects work under these circumstances, project managers should be able to pick team members whom they can trust; if possible, they should have a track record in successful projects. All too often the project manager and team are chosen by senior managers, with the project manager having very little say in the selection of the team. Where possible, the first task of the new project manager should be to get a suitable team.

The QUILT college-based projects identified that a project team should:

- be relatively short-term (6–12 months)
- have a mix of skills and ability
- be flexible
- be responsive to new ideas and concepts
- have a clear idea of the project aims and objectives
- have good communication skills
- have good communication systems and resources
- be responsible to a project steering group
- be monitored on a regular basis
- have a member of the senior management team allocated to it.

> *Anyone who has any interest in team sports knows that a winning team is made up of individuals who excel in different areas.*
>
> Lake, 1997: 108

The management of the project team is an essential role of the project manager. The responsibilities of the team and its members must be clearly identified and agreed.

During the project, members of the team should be responsible for:

- working within their allocated budget
- alerting the project manager to identified problems or issues
- keeping the project manager fully informed
- delivering allocated outcomes on time and within budget
- liaising with other team members and providing assistance where required
- monitoring and managing work under their jurisdiction
- resolving issues and problems where possible, or reporting them to the project manager
- producing necessary reports on time and to the agreed format
- identifying any opportunities that may arise during the project to the project manager.

To do their job, team members must be:

- aware of their roles within the project
- able to work with other members of the project team
- aware of the lines of communication and reporting
- able to work independently
- able to work within the allocated scope
- aware of the level of their authority (decisions and budget)
- aware of the project's budget and time allocation.

The project manager is responsible for ensuring that all team members meet the above criteria before the project gets under way.

Formalising internal and external partnerships

Project partners, both internal and external, tend to be very busy people who will be involved in a number of projects at the same time. If the project's outcomes are to be achieved, all partners need to know what is expected of them and by when. When undertaking projects, it is normal practice to contract work out to individuals and teams, and to use formal contracts or service level agreements to ensure that the desired outcome is achieved. An SLA should contain:

- an overview of the project and its main aims and objectives
- the names of the people responsible for completion of the work
- objective performance criteria (see below) for expected outcomes
- an agreed timetable for the completion of the work
- the costs involved and the method of payment
- the penalty for non-completion of the work
- short-, medium- and long-term project evaluation criteria.
- the completion date and reporting procedure.

It is advisable for project managers to have the SLAs produced by someone with knowledge of contract law. It is important to get each SLA correct at the start of the project, and to ensure that the project manager's interpretation of the SLA matches that of the person signing it.

A number of institutions have standard SLAs. Potential project managers should ask people who have undertaken projects within their institution what sort of contract or SLA they used and where they obtained it.

The addition of short-, medium- and long-term evaluation criteria to the project plan ensures that the project manager will be alerted if all is not going to plan, so that action can be taken.

Developing objective performance criteria

To establish a project's success, objective performance criteria must be established at the start of the project. They must state what is being done, how it is being achieved, when it will be achieved and who is responsible – information that will be incorporated into the SLA.

Writing objective performance criteria is difficult; they require thought if they are to mean anything. For example, the following statements qualify as non-objective criteria:

> *Staff from some curriculum areas will be trained to use information technology (IT). Some will obtain a qualification at the end of the training period.*

To be objective performance criteria, they must be rewritten as:

> *Between January and March 2000, ten staff from the Mathematics department and six staff from the English department will be trained to use Microsoft Word and Excel. All staff will be working toward a nationally recognised qualification* [insert examination and level] *and all staff will be expected to obtain this qualification by 1 April 2000.*

Objective performance criteria were lacking in a number of the initial bids submitted for project funding under the QUILT initiative. QUILT project managers worked with the college project teams to develop the criteria – a time-consuming exercise which nevertheless enabled most colleges to measure the success of their projects.

The project steering group

The QUILT college-based projects have demonstrated that setting up a project steering group is essential to the project management and monitoring process. The group should have a member of senior management involved and, if possible, contain members external to the organisation – from business, industry or partnership organisations.

When setting up a steering group, consider the following:

- Is senior management represented?
- Are all partners and outside organisations represented?
- Does the steering group contain a cross-section of 'experts'? (This is essential with new technology projects.)
- Are minutes of the meetings formally recorded and presented to senior management?
- Are meeting dates set well in advance?
- Have reporting procedures been established?

The steering group should provide *constructive* help and advice to the project manager and team, so that they can successfully complete the identified outcomes. Unfortunately, and possibly due to conflicting interests, some steering groups try to manipulate or even sabotage their projects. Should this occur, a strong chairperson is needed; the issues should be resolved, or new members chosen, at a very early stage.

During a 12-month project it would be normal for a steering group to meet three times: at the start of the project, halfway through to receive the interim project report, and at the end to receive the final report. The steering group should also discuss the integration of what has been achieved, and discuss ideas for future projects that may have arisen. It is normal practice for the steering group to be involved in deciding how the project outcomes should be disseminated.

A number of the QUILT college-based project reports highlight the role of the steering group. These reports can be accessed from the FEDA website (*www.feda.ac.uk*).

Managing a project

3

Time management

The allocation and effective use of time was an issue highlighted by all the QUILT college-based projects. A great deal of time can be wasted if matters are left until the project gets under way. As well as planning prior to the project (see Chapter 2), not being too ambitious and not relying on manufacturers' promises are simple ways in which project managers have been able to maximise the time available.

Feedback from the QUILT projects emphasised that it is important to:

- allocate enough time for the project
- ensure that essential resources, staff and other information relevant to the project are available as soon as it gets under way
- ensure that everyone is aware of their roles and responsibilities within the project
- ensure that everyone has agreed their performance criteria and signed service level agreements (where applicable)
- use effective communication systems
- develop an effective team approach to the project
- ensure that members of the project team can feed issues and problems back in a supportive environment, and that the feedback is acted upon.

There are many publications on time management; see the bibliography or use the web links on the FEDA website (*www.feda.ac.uk*).

Single point accountability

The QUILT projects also identified the need for members of the project team and steering group to be accountable for allocated parts of the project. All too often, meetings take place at which, having previously asked several people to bring essential information for discussion, the chair finds that the information has not been gathered so the issues cannot be discussed. Possible reasons for this are that:

- the chair is not forceful enough when distributing tasks
- the project is not seen as a priority area
- the communication system between the steering group and team members needs to be improved
- members are not clear about what is expected of them.

In many cases, each person has been waiting to be contacted by the others, or has thought that someone else was doing the job. This situation can arise if no one person is made responsible for the successful outcome of the given tasks. The same situation applies to projects.

Single point accountability puts the onus of success squarely upon the shoulders of one person. That person may not in fact be the one to undertake the task in hand, but will make sure that it is completed or be answerable to the group/committee.

With single point accountability:

- everyone is clear about their role and what is expected
- duplication of effort is eliminated
- accountability must be passed on if the accountable team member falls ill or leaves the project; this should be done in consultation with the project manager/chair
- the accountable team member is responsible for reporting changes to the project manager
- the minutes of each meeting must record who is doing what, by when and how.

The initial team meeting

The initial meeting can set the tone for the project. It is essential at this meeting to remove any barriers that may affect the project, and to provide information that clearly identifies the project's aims and objectives and the performance criteria used to measure its success.

At the end of the meeting the project manager should use single point accountability to identify what needs to be done before the next meeting. Rules can be used to lay down formal structures; if this is done, *all* members of the team (including the project manager and senior managers) should use those rules.

At the initial team meeting the following basic information must be provided:

- project bid/plan
- action plan
- budget (overall and breakdown)
- aims and objectives
- performance criteria
- project structural plan
- steering group membership
- rules (if used)
- feedback and communication systems
- list of who is responsible for what
- reporting procedures, times and formats.

The way to tackle ... potential conflicts is by the setting up of effective channels of communication.
Lake, 1997: 108

Team management

This publication will not go into detail about issues related to team building; a number of publications concerned with quality have been produced on the subject, some of which are listed in the bibliography. However, the QUILT projects identified a number of issues that could affect the smooth running of a project. These include:

Culture

The culture in which the team works will affect its members' outlook. Some may have a predetermined 'mindset' concerning ways of doing things: 'We have always done it like this.' This may be the first thing a project manager must overcome when starting a project with a new team.

Personality

An effective project team comprises a number of people, all with their own personalities and individual methodologies. A team should have a good mix of thinkers, reflectors, doers, planners and so on; a good project manager will be able to identify the skills and personality of each individual with a suitable role. Everyone is good at something; the project manager must find out what that 'something' is.

Management

Once the project is under way, managers may wish to follow their own agenda. The project manager must act as an interface between the managers and the project team to keep the latter focused on the task in hand.

Change

The project manager should be aware of any changes that may affect the project outcomes, and integrate those changes into the project. Any changes that may affect the project team must also be appropriately dealt with.

Conflicts

Team members may work on other projects or with other departments, and conflicts of interest can occur. The project manager must be aware of possible conflicts before the project gets under way, and must be in a position to take decisive action should conflicts occur during the project.

Complications

Even the best-planned project will encounter problems. How those problems are overcome, and their lasting effect, will depend upon the planning that went into the initial project – whether time was built into the project for this type of event, for example – and the way in which the team reacts to problems and issues.

Very little will be achieved by apportioning blame. Learning from mistakes and problems is always the best strategy. Experienced project teams are full of people who have learned from mistakes.

Leadership styles

The style of leadership can have a dramatic effect on the team and the outcomes. An even, 'firm but fair' balance is always the best strategy. Project managers should have the skills necessary to unlock the full potential of each team member.

> *Leadership plays an important role in the successful execution of a project.*
> Kliem, 1998: 45

Closing the project

Formally closing the project is another important part of project management. The project manager should make sure that all performance criteria have been achieved, invoices paid and partners thanked for their contribution. Most projects in education and training also require the production of some sort of final report delivered to senior managers.

Useful headings for the final project report may include:

- project summary
- project team and steering group membership
- initial aims and objectives
- expected outcomes
- budget and time allocation
- actual outcomes
- problems and issues encountered during the project
- solutions
- transferable models of good practice
- the 'way forward'
- feedback and evaluation
- conclusion
- recommendations.

The final report's format will vary, but project managers should try to present the final report to senior managers rather than just providing a written report.

The aim of any project undertaken in education and training should be to improve the potential or quality of service to the learners and, if possible, to produce a cost saving for the institution.

The success of any such project is usually measured not in profit or production, as it would be in business and industry, but by integration of the outcomes into normal curriculum delivery and the follow-on projects it stimulates. (One college used to be said to have 'more pilots than the RAF': although a number of projects had been undertaken, very few of the outcomes had been integrated into normal education/training systems or curriculum delivery.)

Project management tools

4

Project management software

The use of project management software will not make up for poor project management. The software should be seen as a tool and used by people who understand it. Training on project management software should not take place during the project, or valuable time that could be used achieving the project outcomes will be wasted.

If project management software is used, all of the project team must be able to use it. Otherwise, the project manager will end up with information from the team in a variety of formats, which will obviously affect the effectiveness of the reporting process.

This chapter highlights a few of the packages available to the project manager and identifies websites providing more information or demonstration copies of the software discussed.

Project management software is useful:

- for large or complicated projects
- when the project team know how to use it properly
- when the benefits of using the software outweigh the problems.

To choose a project management software package, first gather a list of packages. List the advantages and disadvantages of each, then get demonstration copies and evaluate them. Questions to ask when choosing project management software are:

- Is the software necessary?
- Is the software to become the organisation standard?
- Will all the people involved in the project need to use it?
- What will be the cost per user?
- What will be the cost of training staff?
- Will it assist in achieving the project performance criteria?
- Is support available from the manufacturer?
- Is support available on the Web?
- Are user groups on the Web?
- Can you publish on the Web?

An overview of selected software – free downloads

Turboproject 1.0

Relatively inexpensive and able to cope with large projects well, Turboproject takes a top-down approach to project management. The user can set the outcomes and completion dates before breaking the project down into smaller components.

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The software lets the user create and view schedules in three different ways:

- Gantt chart
- activity table in columns
- project network tree.

There are some restrictions when trying to customise certain features.

More information is available at the International Microcomputer Software website (*www.imsisoft.com/turboproject*).

Milestone, Etc.

Although it does not include budgeting and resourcing management, Milestone, Etc. offers basic project management tools with good scheduling features. With the project outliner, the user enters every component of the project, and can then show the duration of each component. Links between tasks can be added and are modified automatically when changes are made. However, the programme has no resource management facility and the user cannot link resources directly to individual tasks.

For more information and a free trial package, visit the Kidasa Software website (*www.kidasa.com*).

ProjectLEAD 1.0

This innovative piece of software includes a personal priority list, advice on team building and influencing stakeholders, and a checklist option for making key decisions.

The Momentum Consulting website (*www.momentumc.com*) has more information and a free demonstration package.

SureTrak Project Manager 2.0

SureTrak requires some project management experience but offers comprehensive scheduling and resource control. Key tasks for individual project team members can be applied to coloured bands on the chart, making it easy to assess workload even with long and complicated projects. By using the 'spotlight' tool, the user can easily highlight tasks to be undertaken. Drag-and-drop facilities are available and easy to use, with wizards for more complicated tasks. A new feature, SendMail Wizard, enables the user to request information from people who are working on the project.

More information and free demonstration software can be obtained at the Primavera Systems website (*www.primavera.com*).

Microsoft Project

With several million users, Project is one of the most popular project management products. It is easy to use and contains all the packages required for good project management. Wizards guide the user through the building of projects, and most of the symbols used are self-explanatory. There are many additional features, and information can be published to intranet/Internet. The package is fully compatible with Microsoft Office applications.

Visit the Microsoft website (*www.microsoft.com/office/project/default.htm*) for more information and free demonstration materials.

Time Line for Windows 6.1

Time Line has some impressive features, including an automated project builder, a report generator and a database manager. A project overview window is provided and allows users an overview of the project, resources, calendars, layouts and user-defined formulae. A multiproject facility allows the user to view a group of projects.

The Time Line website (*www.tlsolutions.com*) contains further information.

Other software-related websites

- Scitor Corporation: *www.scitor.com/products/products.htm*
- Critical Tools, Inc.: *www.criticaltools.com*
- Experience In Software, Inc.: *www.experienceware.com*

Project management websites

- The Project Management Learning Centre: *www.dab.uts.edu.au/projmgmt*
- MaxValue – Risk and Economic Decision Analysis: *www.maxvalue.com*
- Alliance for Continuous Improvement: *www.citoolkit.com*
- Cranfield University: *www.cranfield.ac.uk/som/projman/prmnhome.htm*
- University of Glamorgan: *www.comp.glam.ac.uk/pages/staff/dwfarthi/projman.htm*
- The Hampton Group, Inc.: *www.4pm.com*
- WWW Project Management Forum: *www.pmforum.org*
- Project Management Institute: *www.pmi.org*
- Project Management Center: *www.infogoal.com/pmc/pmchome.htm*
- ProjectNet Glossary of Project Management Terms: *www.projectnet.co.uk/pm/glossary.htm*
- ALL Project Management: *www.allpm.com*

Information available from the Microsoft website

- Web project management: *msdn.microsoft.com/library/devprods/vs6/vinterdev/vidref/viovrwebprojectmanagement.htm*
- Business analysis/project management: *msdn.microsoft.com/library/books/advnvb5/Ch16_23.htm*
- Insist on great project management: *msdn.microsoft.com/library/books/advnvb5/Ch16_8.htm*
- The history of project management: *officeupdate.microsoft.com/downloaddetails/projhistory.htm*
- Overall project team structure: *msdn.microsoft.com/library/devprods/vs6/vstudio/vsentpro/veconoverallprojectteamstructure.htm*

Projects in a controlled environment (PRINCE)

PRINCE has been developed as a UK Government standard for IT project management. It has been widely used in both the public and the private sectors since its introduction in 1989. Although PRINCE was originally developed to cater for the needs of IT projects, it is fast becoming one of the leading standards for non-IT project management.

The benefits of using PRINCE are that it:

- identifies management, specialist and quality products/deliverables and helps ensure that they are produced on time and to budget
- focuses attention on the quality of products/deliverables
- separates the management and specialist aspects of organisation, planning and control
- facilitates control at all levels
- makes the project's progress more visible to management
- provides a communication medium for all project staff
- ensures that work progresses in the correct sequence
- involves senior management in the project at the right time and in the right place
- allows the project to be stopped and, if required, restarted completely under management control at any time in the project's life
- is in the public domain and requires no licence fee
- has a well established user group dedicated to the support, promotion and strengthening of the method.

In PRINCE, each project undertaken must address all the processes concerned with establishing an effective project management environment, and must have:

- a stated business case indicating the benefits and risks of the venture
- a properly defined and unique set of products/deliverables
- a corresponding set of activities to construct the products
- appropriate resources to undertake the activities
- a finite lifespan
- suitable arrangements for control
- an organisational structure with defined responsibilities
- a set of processes with associated techniques that will help plan and control the project and bring it to a successful conclusion.

The PRINCE framework provides the flexibility to set management stage boundaries that are appropriate to the needs of the project. These boundaries are chosen according to:

- the sequence of production of products/deliverables
- the grouping of products into self contained sets or associated processes
- natural decision points for review
- the risks and business sensitivity of the project
- the completion of one or more discrete processes.

For further information about PRINCE, contact:

The Central Computer and Telecommunications Agency
www.ccta.gov.uk/prince/prince.htm
E-mail: pnewman@ccta.gov.uk

The APM Group Limited
7–8 Queen Square, High Wycombe,
Buckinghamshire HP11 2HP
www.apmgroup.co.uk
Tel: 01494 452450
Fax: 01494 459559
E-mail: info@apmgroup.co.uk

Case studies

5

Feedback from the QUILT college-based projects

The QUILT project reports suggest that projects are successful if they contain some, or preferably all, of the following:

- support from senior management
- help, advice and monitoring from a steering group
- clear and realistic aims and objectives from the start of the project
- measurable performance criteria
- identified roles within the project team
- good team and project management
- relevance to the identified needs of the college, staff and learners
- outcomes integrated into normal college delivery or systems
- time allocated to the project
- finance correctly targeted
- qualified staff available to cover for project team members
- an action plan showing the timescale and identified personnel, provided at the start of the project
- issues arising from the project discussed at an early stage
- involvement of learners wherever possible
- motivated staff and learners
- good communication systems.

Projects involving new technology bring additional problems because:

- the identification of software/hardware takes time
- the evaluation of software/hardware takes time
- there is no time to keep up with technological advances
- new products are being developed at an ever-increasing speed
- promises made by the software/hardware companies do not always live up to expectations
- learning to use new software takes time
- being at the 'leading edge' can be expensive as prices of equipment and software fall.

The following case studies have been taken from the QUILT England and QUILT Wales final reports and have been included to highlight some of the practical benefits and issues encountered during 'real-life' projects. The complete reports are available on the FEDA website (*www.feda.ac.uk*).

CASE STUDY 1

Learning to teach online (LeTTOL) (1997)

Institutions South Yorkshire Network for Enterprise
(report submitted by Barnsley College)

Themes New technology; online learning; flexible and open learning; staff ILT/ICT development; e-commerce.

Project overview

The project's aim was to provide a training and awareness structure for tutors who may be supporting students and learning programmes in an online learning environment.

The format of the project was the development, piloting and delivery of an online course which would be accredited through the National Open College Network. The issue of accreditation was considered important as it would give recognition to this area's significance: participants would gain recognised accreditation for the programme, and the course's longer-term viability would be ensured as it was brought within the scope of the Further Education Funding Council's funding methodology.

An essential feature of the course was that its aims would be underpinned by its design and methodology, in that the majority of activities – learning, tutor support, peer interaction and assessment – would occur online. Participants would thus experience what it was like to be an online distance learner and gain an insight into the issues that may need to be addressed in this new learning environment. As one of the participants in the pilot programme said:

> *The difficulty is that, until the learners have experienced the teaching/learning medium, a lot of points about online learning will be water off a duck's back, as you have to have 'felt it' before you can relate to it.*

Furthermore, we wanted to raise awareness of the potential of computer-mediated communication to transform traditional distance education.

At a minimum level, new learning technologies offer speedier and easier access to tutor feedback and interaction, but this still presupposes the one-to-one/one-to-many model of traditional distance education. The real potential of computer-mediated communication is its ability to provide a many-to-many mode of interaction, which can not only transform distance education from an individual to a social process but can also facilitate collaborative learning. We believe that this project has provided one of the first examples of this paradigm in action in the FE sector.

Our key desired learning outcomes were:

- to understand the main characteristics of online learning
- to understand the key methods of delivery and types of online learning activity
- to be able to access and deploy appropriate online learning resources
- to understand the main learning management issues pertaining to online learning
- to appreciate the technical requirements and constraints pertaining to online learning.

Evaluation

Evaluation by the learners on the pilot phase of the project was very positive and the key finding was that on-line learning really works; comments included 'really good', 'superb' and 'excellent course'.

However, a number of constructive suggestions came out of the evaluative process, which were used to modify the programme prior to the start of the project's main phase:

- Participants felt that some face-to-face activity is essential during online courses. This element was maintained in the main phase.
- Technical difficulties must not be underestimated. Therefore:
  - tutors need a good grounding in online skills before they embark on teaching such a course
  - colleges need to understand their responsibility for providing access and technical support to their cohort of learners
  - learners need to be familiar with the medium, and clear selection criteria need to be reinforced. In the pilot there was a broad range of prior experience, from virtually nil to advanced. The aim of the programme was to develop online tutoring skills, not to teach participants to use e-mail and the World Wide Web.
- Online learning takes time, especially when collaborative learning activities are incorporated. In response to this finding, the programme was spread over a longer period, increasing from 12 to 16 weeks in the main phase.
- Delivery needs to be tightly structured, so that learners know exactly what they have to do and by when. To this end, new individual record sheets were designed for learners to record their own progress and forward to their tutors by e-mail attachment at regular intervals. An online group progress record card for tutors was also introduced.
- Tutors found that facilitating learning online was time-consuming; adequate hours need to be allocated for tutoring. Learners expected and appreciated active tutor involvement, providing:
  - swift acknowledgement and responses to messages
  - encouragement and ongoing monitoring of individual progress.

Benefits from the project and future developments

The LeTTOL project has greatly increased the South Yorkshire Network for Enterprise's potential to create an infrastructure for the online delivery of courses in small and medium-sized enterprises and the community. By February 1998 there will be a team of at least 50 tutors across the consortium with the ability to support online learning developments. It is intended to run the course again from March 1998.

There has been a perceptible shift in understanding of online learning's potential. Previous models had concentrated purely on the benefits of online technologies for enhancing and streamlining a 'delivery' model of learning whereby suitable materials could be accessed conveniently online by individual distance learners. As a result of this project, the potential of online collaboration and the wider use of online resources have been explored by a wide range of practitioners, who have also had the opportunity to translate this experience into the design of elements in their own courses.

The most interesting aspect of the project has been its collaborative nature. This has led to wide-ranging discussions on future partnership initiatives. Given the networking models proposed in major new initiatives such as the University for Industry (Ufi) and the National Grid for Learning (NGfL), the South Yorkshire Network for Enterprise is now well placed to play a dynamic role in future developments.

Information taken from the 1997 final project report.

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CASE STUDY 2

Cross-college staff development – accessing and using ILT within the curriculum (1997)

Institutions North East Sixth Form Colleges Network (NEVIC-net consortium)

Themes ILT/ICT staff development; integrating ILT into the curriculum; flexible and open learning.

Introduction and project overview

The project was planned and coordinated by the NEVIC-net consortium, comprising seven sixth form colleges based in the North-East of England:

- Bede College, Billingham
- Hartlepool Sixth Form College
- Prior Pursglove College, Middlesbrough and Guisborough
- Queen Elizabeth Sixth Form College, Darlington
- St Mary's Sixth Form College, Middlesbrough
- Stockton Sixth Form College
- Tynemouth College.

The main aims of the project were to:

- establish curriculum-based, cross-college groups to develop staff awareness of new technologies and their possibilities within the curriculum
- develop the ILT skills and knowledge of staff within the colleges
- evaluate ILT-based materials for use in specific curriculum areas
- consider the re-presenting and development of packages to enhance student learning
- share in developments and materials across the colleges.

These aims were to be achieved by raising awareness and levels of ILT skills (through a series of cross-college training and development seminars), developing understanding and confidence to enable curriculum-based, cross-college groups of staff to progress further within their own colleges and departments. The principles of cross college cooperation and teamwork were applied at all times.

To make the most effective use of the time and resources available within the project, we decided to focus attention on a specific range of A-level curriculum areas common to all the participating colleges:

- biology/chemistry
- English/media
- sociology/psychology
- history/politics
- geography/geology
- modern languages.

These were chosen in preference to areas such as information technology or business studies, where there is a greater 'tradition' in the use of technology for learning.

Each of these six curriculum groups was represented by a maximum of two staff from each college, who would act as liaisons between the curriculum group and their colleagues within the colleges.

Delivery of the project spanned two phases. The first provided opportunities for delegates to develop skills and understanding in the use of ILT and in the production of appropriate learning materials. The second was aimed at helping delegates focus specifically on the development and use of ILT materials.

Benefits from the project

Throughout the development of the project, both the coordinators' group and the participants have recognised several additional benefits, not targeted in the original bid, emerging from the project activities:

- professional inter-college relationships between individuals and departments have developed
- the formation of the coordinators' group:
  - has created a valuable forum to focus on staff development issues
  - has stimulated good working relationships and enabled full debate of the issues raised
  - could provide a useful model for inter-college cooperation in the future
- the 'cascade effect' on departments within colleges has been underestimated, with many college management teams receiving regular requests for further opportunities to develop ILT materials
- staff from across several colleges are coming forward to take a lead in developments within their curriculum areas
- the NEVIC-net consortium of colleges has established a strategic steering group to identify and direct potential partnered development opportunities
- it is estimated that, through the project activities, at least 200 students, who might not otherwise have done so, have experienced the use of ILT resources.

Conclusions

The NEVIC–QUILT staff development project has been a major achievement, enabling the target group to access development opportunities that otherwise would have been inaccessible in the timescale. The project has provided opportunities for staff within the colleges to develop the skills necessary to make the most effective use of these resources, and has contributed directly to the promotion of ILT and QUILT across the consortium.

While some concerns were raised relating to time out of college, most participating staff have been highly motivated; although attendance has been 'inconvenient' for them, they have found their absence from college most rewarding. The main difficulties arose from the following issues:

- lack of time for staff to be involved as much as they would like
- coordination of group activities outside those scheduled, due to travelling
- the longer-than-anticipated timescale needed for staff to become familiar with the use of ILT-based materials
- attempts to progress developments over the summer vacation, linked to the use of busy times of the year for seminars and focus sessions.

Although moving the project forward as a consortium will not be without its challenges, it is rewarding to see that staff are proactive and that the following plans are being made to address these issues:

- a NEVIC-net strategic group has been formed
- colleges are using or planning to use professional development days to promote the use of ILT-based resources
- staff who have participated are requesting further advice or training in converting materials for use on the consortium intranet
- staff who have not participated are requesting training in the use and application of ILT.

Each member college of the consortium should give serious consideration to further staff development opportunities of a similar nature if it is to move forward and develop learning styles for the future. The proposals put forward from the Higginson Committee are being realised and colleges need to position themselves accordingly if they are to be recognised as an essential part of the future learning infrastructure. This includes a workforce able to use and promote quality in communication, information and learning technologies of the future.

Information taken from the 1997 final project report.

CASE STUDY 3

Using the Internet and multimedia CD-ROM to encourage supported self-study (1997)

Institution St David's Sixth Form College, Cardiff

Themes Integrating ILT/ICT into the curriculum; ILT/ICT staff development; flexible and open learning.

Introduction and project overview

Involving more than 100 students, the St David's Quilt project sought to equip staff and students with the skills to engage in the use of the Internet and multimedia CD-ROM in the development of purposeful, supported self-study. The experience and findings from the project will assist in the sustained cross-college development in the use of these resources, and will continue to raise staff and student confidence and skills in the application of this relatively new technology to learning.

The project's aim was to develop the use of ILT. The specific objectives were to:

- incorporate the use of ILT (specifically use of the Internet and multimedia CD-ROM applications) into selected programmes of study – A-levels in Business Studies, Geography, History, Politics and Government, and Religious Studies
- enhance student skills in the use of ILT to manage and develop their own learning
- utilise the project results to further develop ILT and flexible learning approaches throughout the college
- disseminate findings and materials to other schools and colleges via FE-NET.

The planned project outcomes were:

- enhanced student learning
- increased staff confidence in the application of aspects of ILT to the curriculum
- recommendations for the future development of ILT within the college
- the production of learning materials in relation to ILT.

The project outcomes will be used to support the development of ILT and flexible learning within the college after completion:

- As a direct consequence of the project, all faculties within the college are constructing development plans relating to the use of ILT in accordance with the framework constructed. This process is drawing heavily on staff and student experiences during the project.
- An internal review and evaluation report is being completed and distributed to all faculties within the college, and to senior management. In particular, it seeks to highlight strategic and resource issues in relation to the development of ILT.
- Findings from the project will be conveyed via internal INSET activities to all curriculum areas. An INSET programme for 1997/98 is being constructed, which will support faculty activities in relation to the development of ILT. Those engaged in the project will provide support and training for colleagues.
- The project will be used as the basis for extending the development of ILT and flexible learning throughout the college. As a result of the project, the inseparable nature of more flexible approaches to curriculum delivery and the use of ILT have become more fully appreciated by staff involved in curriculum delivery.

- Other institutions will have access to the materials produced via the Internet, and will have access to the reports made.
- An improvement cycle in relation to materials produced will be undertaken. They will remain 'live' documents.

Issues raised by the project

Utilising the college 'IT across the curriculum' committee as the steering group was particularly successful. The group drew upon expertise from all sections of the college, giving coherence to a project that could have fragmented along narrower lines. This wider forum also meant that information and learning experiences derived from the project were more effectively disseminated throughout the college than they might otherwise have been.

Earlier college experience of flexible learning assisted the project. Staff with relatively little IT experience were able to see IT as a powerful tool, which could greatly enhance the more flexible approaches to the curriculum that they were eager to adopt.

Clear criteria for the evaluation of the materials produced is essential. Such criteria formed the basis for sound professional discussion of the issues involved. They also provided an objective framework against which self-evaluation by unit authors could be undertaken.

Training needs must be clearly identified at a project's outset, and planned development in line with the demands set by the project or activity must be carefully coordinated. We achieved this via the use of staff IT skills audit information. Such coordination is especially important in projects operating to a tight timetable. Time for training and development is essential. With the extension of the work commenced by our project into the next academic year, INSET provision is a priority and should take place within a sustainable, planned and synchronised time-frame.

The issue of staff confidence relates in part to training, but some staff required additional support, in the form of paired working and team approaches, to become more confident. (The ability to pair is limited in a small-scale trial by staff's subject specialisms, however.) The project led to a significant emphasis on teamwork. It brought together teachers from different curriculum areas, with varying levels of expertise in the use of ILT, who shared expertise together willingly. A model of delivery in terms of group work in problem solving, which is transferable to other staff and students, was developed. Where staff confidence was low, support was readily available from colleagues. Experience of work on flexible learning also meant that staff could proceed from the familiar to a less familiar context without too much difficulty. Additional technical support was needed for some staff.

The project's timescale was, of necessity, compact and limited in its flexibility. Production of materials proved time-consuming. The tight time-frame did, however, provide a sharpened focus for the operation of the project.

While student involvement in the project as a whole was high, involving more students in the preliminary stages of the project would be considered if the project were to operate again. In future, it should also be possible to involve students in the technical development as part of their assignments for external assessment at A-level.

A common approach to the key skills of improving one's own learning and performance and problem-solving was developed across curriculum areas. These have been and are being more fully developed so that they can be extended.

Information taken from the 1997 final project report.

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CASE STUDY 4

Focusing ILT/ICT development by piloting the JEB Certificate of Competence in the Educational Use of ILT/ICT (1998)

Institution Neath College, West Glamorgan

Themes Staff development; integrating ILT/ICT into the curriculum.

Introduction and project overview

The Neath College QUILT project is a staff development programme designed to help staff in their day-to-day work by raising awareness and skills in the use of the latest technology, including the Internet and CD–ROM. The project pilots the use of the JEB Certificate of Competence in the Educational Use of IT as a means of accreditation. The programme is intended for practising lecturers and trainers of any discipline who wish to gain competence in and understanding of ILT.

This study looks into the feasibility of using the JEB Certificate of Competence in the Educational of Use of IT as a means of helping the integration of ILT into mainstream courses.

The aims of the project were to:

- focus ILT developments by piloting the JEB Certificate of Competence in the Educational Use of ILT
- raise staff awareness and skills in the use of ILT
- encourage the integration and use of ILT into mainstream courses.

The objectives were to:

- focus the development of ILT by using a certificated programme
- implement an ILT staff development programme using the JEB Certificate of Competence in the Educational Use of ILT
- raise staff awareness and skills in the educational use of ILT
- provide skills training, enabling staff to develop:
  - practical IT skills
  - the ability to use educational software
  - competence in the use of communications systems
- help staff integrate ILT into mainstream courses.

The planned outcomes of the project for QUILT were:

- a costed and evaluated ILT staff development programme, which will encourage the integration of ILT into mainstream courses
- a number of staff (15) who are competent in the educational use of ILT across the curriculum
- an improved educational experience for students through the use of ILT
- flexible learning materials that support staff undertaking the JEB Certificate
- presentation materials suitable for raising lecturers' awareness of the benefits of integrating ILT into their curriculum
- four case studies of ILT integrated successfully into the curriculum, and three staff case studies suitable for distribution via the Internet
- the dissemination of information at QUILT/FEDA/Fforwm events
- interim and final reports available on the college website and accessible via the Internet.

For the college, the project is seen as a long-term strategy pilot to raise staff awareness and skills with a view to integrating ILT into mainstream courses. The main planned outcomes of the project for the college are :

- a redesigned programme in the light of the project's experiences and outcomes
- the inclusion of this programme into staff development and college strategic plans
- a series of curriculum-specific inset events to cascade staff experiences
- case study material, published and available to college staff, which will raise awareness of the use of ILT within the institution.

Issues and solutions

Problematic issues identified to date are:

- estimating the time required to develop the programme and to research resources and materials
- evaluating different materials, e.g. books, disks, computer-based training, CD–ROM and multimedia, for the target audience
- catering for the different requirements of staff, identified by a questionnaire at the launch of the programme
- estimating the time required to deliver the programme
- ensuring staff commitment and attendance.

The solutions are less easy to identify, but some lessons can be drawn. For example, sufficient time must be allocated to the design and development of the programme. The initial estimate of five days has proved to be inadequate; a revised estimate would be 10 days or 60 hours over a two-month period.

The evaluation of resources is a critical activity. The JEB provides a study pack for the course, which needs to be supplemented with additional resources. Our aim has been to use a variety of resources including computer-based training and multimedia, hopefully with automatic tracking.

Due to the tight timescale and limited budget, we have decided to use Microsoft Press materials (*Step by step*, which includes a book and disk) for the practical skills, supported by the *Microsoft starts here* CD–ROM, together with the *Course technology computer concepts* book and CD–ROM for the theoretical aspects of the programme. This product includes a multimedia dimension, which staff follow to update their understanding of IT. The assessment facilities with the CD–ROM can be used to test staff knowledge and produce the evidence for their portfolios.

Materials from the BBC *Computers don't bite: teachers* campaign and associated website will also be incorporated into the programme.

It is important to vary the learning experiences of staff, and to design a programme that can cope with people's different needs. The design of the programme must be flexible because the requirements will vary between different groups of staff. Therefore, a bank of resources is required.

Lack of staff availability has led to the scheduling of additional sessions, which means that the time estimated to deliver the programme will be exceeded. The original estimate was three one-hour sessions per week for the duration of the taught core; this has been increased to four one-hour sessions. An alternative strategy is to schedule the programme outside term time.

The programme selected 15 staff who were perceived as interested in developing and updating their IT skills. Thirteen attended the launch of the programme. Two extra staff who had expressed an interest in the programme were then invited to join the project. Over the first two weeks the majority of staff attended the timetabled sessions.

Information taken from the 1998 final project report.

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CASE STUDY 5

Developing an intranet for learning at Bridgend College (1998)

Institution Bridgend College

Themes ILT/ICT staff development; flexible and open learning; Integrating ILT/ICT into the curriculum.

Introduction and project overview

Bridgend College has a well developed academic and administrative local area network with over 600 workstations. It is mainly used for downloading standard software applications, programming software, Internet access and e-mail. The School of Information Technology also has its own local area network with three fileservers, which are accessible over the campus network. In order to develop the use of these networks and to use the technology to enhance students' learning experiences, college staff were keen to develop suitable learning materials that could be accessed by staff and students via the intranet.

The aims of the resulting project were to investigate methods of developing:

- the existing college networks, in order to enhance student learning
- teaching and learning materials for the intranet.

The project's objectives were to:

- investigate five areas of the curriculum that would benefit from the production of online teaching and learning materials
- provide staff development, enabling teaching staff to produce learning materials
- install and pilot the above materials
- evaluate the above materials' effectiveness, and make modifications where necessary
- provide guidelines to the college on the implications of extending the intranet to the whole college
- identify colleges that have developed intranets and learning materials for their intranets, and undertake one benchmarking visit to such a college.

The following outcomes were proposed:

- a staff development programme to introduce and develop skills in producing intranet materials
- a steering group to advise the college on intranet developments
- a facility for the development of shared work space for learning materials, with access using intranet technologies
- guidelines for the future development of college intranets
- pilot materials for teaching and learning on the intranet.

Benefits from the project

One of the main project outcomes has been in the area of staff development. First, staff who would not normally work together have worked well as a new team, sharing their knowledge and experience. Second, staff have been given the opportunity to develop materials that they had not previously had time to develop. These two factors together have made the project worthwhile in establishing links between staff and creating opportunities to learn from one another.

Problems encountered

One of the main problems concerns the time required to acquire new skills and then to use them to develop, test and evaluate teaching and learning materials. The project team underestimated the amount of time needed for this; as a result, progress was slow at the start of the project and there was insufficient time to test and evaluate the final products thoroughly.

The use of FrontPage at a later stage simplified the production of materials; again, however, staff needed to learn how to use the software effectively.

We did not foresee any particular problems arising from the use of Linux, knowing that it would support standard HTML pages developed on any platform, and that it had support for CGI programming, Java, Java scripts and databases. This would allow staff to develop pages on either platform, leaving them free of the worry of detail on the server. Only when some of the initial work was completed in FrontPage and transferred to the Linux server did we realise that some of the proprietary extensions were not directly supported by Linux Web software. However, after some searching on the Internet, extensions for other platforms as well as Linux were found.

Recommendations

We recommend that any college considering a similar project in the future should:

- select carefully a team of developers with a wide range of experience and interests
- set realistic deadlines for the production, testing and evaluation of materials, and keep to these deadlines
- decide on agreed outcomes for each set of teaching and learning materials
- decide on a set of design standards for the materials
- involve students at an early stage
- use a Linux server and the free software available.

Conclusion

Staff involved in the project agree that there is a need for interactive learning materials. They have shown that it is very time-consuming to produce quality materials in-house, and it is difficult to find such materials commercially. However, the personal staff development in this area has been most beneficial, with staff working together and sharing experiences. All are now demanding further time in order to develop more and better materials.

The interest shown by the development staff will ensure that the ideas will continue and that the materials and access will be extended across the college. Staff have developed new skills and are keen to use them. The project has shown that staff are willing and able to produce materials that they can use in the classroom. The project team will disseminate this knowledge to a wider group within the college, and ensure that developments will continue into the next phase.

CASE STUDY 6

Using ILT to motivate disaffected youngsters (1998)

Institutions Gloscat, Royal Forest of Dean College, National Star Centre, Cheltenham and Gloucester College of Higher Education

Themes Widening participation; ILT/ICT staff development; flexible and open learning methodologies

Introduction and project overview

A major strategic objective of the colleges involved in this project was to bring back to learning those young people who are currently not participating in further education. Among the key issues for colleges in the FEDA research project 'Giving young people a new start' is the need to:

- develop more proactive outreach work, in order to contact and provide for potential students
- experiment with relevant systems of assessing, recognising and recording achievement
- develop new partnerships with others working in this field
- continue to target specific groups that are under-represented in the colleges
- ensure that students enjoy college, so giving them the key to lifelong learning.

ILT and electronic media have the potential to integrate and deliver these features to young people in outreach provision. Most young people have an affinity and enthusiasm for technology, as seen in the popularity of computer games among this age group. The project aimed to use this interest to motivate disaffected youth and bring them back into learning. The project also had a key focus of making staff aware that the creative design of electronic learning materials for effective communication and learning is as important as the technical expertise and hardware needed to deliver it.

The partners provided a range of expertise and specialist focus. Gloscat is a large FE college serving the towns of Gloucester and Cheltenham and surrounding areas. Royal Forest of Dean College serves a rural community. The National Star Centre is a residential, specialist college for students with physical or sensory disabilities and associated learning difficulties.

The partner colleges were supported by ILT advice and consultancy from the Cheltenham and Gloucester College of Higher Education. As the project aimed to make online contact with young people in outreach centres, external organisations supported the project by providing this contact. These supporting organisations included Investment in Young People, the Community and Youth Organisation, the Careers Service and Home Tuition Centres.

The project was targeted at disengaged youngsters and developed ways of using ILT in outreach provision to motivate them and raise their expectations. The project aimed to:

- develop staff skills in the design of creative and innovative styles of electronic learning materials for the 'reluctant' learner, and in online tutoring
- produce a model for using electronic learning materials and interactive assessment systems to motivate disengaged young people, and support them in self-assessment and planning progression pathways.

It focused on college staff development in:

- making electronic learning materials exciting and stimulating
- developing skills and an awareness of the main issues in online tutor support for self-assessment, and identifying personal targets for progression.

It also provided development for outreach workers in accessing online support for clients.

The project utilised the potential of electronic media to access the range of support and guidance already available in Gloucestershire for young people.

Lessons learned

The project was hindered at the start when academic, non-IT members of the team had difficulty communicating their design brief to the team's ILT experts. The academic staff did not appreciate the amount of information required to convert their ideas into a brief that the ILT experts could use in producing material. Staff development in aspects of ILT is needed before academic staff can communicate their thoughts on curriculum design effectively. They need to be aware of the potential and constraints of the technology as a framework for their ideas.

We also found that:

- the project team needed to be involved more fully in writing the initial project brief
- student involvement early in the process was helpful, to test out ideas
- the support of representatives of external organisations on the steering group was very useful.

Visit *www.chelt.ac.uk/lis/lbailey/quilt.htm* for course information and sites for evaluation.

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Becta case studies

As part of a project funded by the Department for Education and Employment (DfEE), the British Educational Communications and Technology Agency (Becta) has produced an excellent publication, *Lifelong learning: ILT projects*. This contains a number of essential hints and tips for project managers, and provides practical case studies so that the reader can see how projects have been managed in practice. More information is available at the Further Education Resources for Learning website (*ferl.becta.org.uk/ellilt*). The following case studies are available from this website at *ferl.becta.org.uk/ellilt/guidance/case.html*:

Blackpool and Fylde College

Project Regional Open Systems for Education (ROSE) and SIGMA projects

Themes Use of new technology; flexible delivery; college interconnection.

Bournemouth and Poole College

Project Writing courseware for the college intranet

Themes Use of new technology; flexibility of delivery; combating disaffection.

City College Norwich

Project University for Industry project – Norfolk and Waveney

Themes Flexibility of delivery; increasing participation rates.

Daventry Tertiary College

Project The Northamptonshire key skills online project

Themes Key skills; flexibility of delivery.

Dundee College

Project Basic skills development for the priority sectors

Themes Key skills; flexibility of delivery.

Mid-Cheshire College

Project Flexible learning information web

Themes Use of new technology; flexible delivery; business/management skills.

North London and Lee Valley

Project The Open Learning Partnership

Themes Use of new technology; flexibility of delivery.

Salford College

Project The technology bus – Salford and Tameside Colleges

Themes Use of new technology; flexibility of delivery; use of labour market information.

Staff development exercises

6

The staff development exercises that follow have been provided to reinforce the main issues and concepts put forward in Chapters 1–4.

Practical exercises | Chapter 1

1.1 Identify your institutional model

- Identify three projects recently undertaken by your institution
- Use 'post-its' to note the names of the project managers, team members and senior managers
- For each project, arrange the 'post-its' on a flip chart and draw in the lines of communication and reporting
- Note any common features between the projects
- Identify any transferable models of good practice that have been produced during the projects, and the formats used for them.

1.2 Successful project management

- Identify projects that have been successful
- Identify any common links between the management structure and the successful projects
- Identify any transferable models that could be used to manage new projects.

1.3 Identify the benefits

For this exercise you will need a copy of your institutional plan.

- Do all the projects identified in Practical 1.1 support the institutional plan?
- Of those that do, what benefits will they have for the institution and what might be the possible impact if they are successful?
- If any of the projects do not support the institutional plan, can you identify the benefits they might bring to your institution?
- If projects do not support the present institutional plan, does it need to be revised? How?

1.4 Develop your systems

- Develop a flow chart that highlights the way projects are managed in your institution
- On the flow chart, indicate who is responsible for what
- Note any common features and the levels of reporting used
- Note whether any changes to your institution's project management system could be made, and discuss these changes with colleagues
- Consider whether 'informal' project management systems should be used/developed.

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1.5 Discover good practice

- Draw up two lists: one explaining why projects at your institution succeed and the other highlighting the reasons for projects' failure at your institution.
- Assess whether any of the good practice can be transferred to other projects
- Assess whether any of the bad practice can be eliminated.

Practical exercises Chapter 2

2.1 Estimating costs

- Identify the people in your institution responsible for estimating project costs
- Identify the projects with which they have been involved
- If possible, obtain a copy of the original bid and the final report for each project
- If standard institutional costings (staff time, administration, specific resources, etc.) are available, obtain copies
- Working in small groups, discuss the projects with which the institution has been involved. Try to identify:
  - any transferable models of good practice
  - any common costing errors in the projects undertaken
  - ways of overcoming those errors
  - common institutional costs.

2.2 Identifying the project team

- Try to identify the characteristics required by members of a project team
- If you are already working on a project, see whether you can identify any of the following characteristics in your team (note that the list is not exhaustive; you may need to add other characteristics):

thinker	pragmatist	pessimist
reflector	theorist	optimist
activist	negotiator	enthusiast
innovator	fixer	questioner

- Draw up a list of the characteristics of your team members. Alongside each characteristic, identify the positive and the less positive attributes that team member brings to the project.

2.3 The team service level agreement (SLA)

- Discuss the advantages and disadvantages of developing SLAs for team members
- Working in groups, use 'post-its' to highlight the main requirements that should be included in a SLA
- Discuss the type of penalties that are appropriate
- Bring the group exercise together and produce the main requirements and appropriate penalties for the SLA.

2.4 Developing objective performance criteria

- Looking at past project bids, try to identify any non-objective performance criteria used. (See 'Developing objective performance criteria' in Chapter 2 for an example.) Make a list of these, and alongside write the corresponding objective performance criteria. Discuss in groups the differences between the two.

Practical exercises | Chapter 3

3.1 Identifying time management issues and solutions

- Working in small groups, use 'post-its' to identify what you consider to be the main issues regarding time management. Put the 'post-its' onto flip-chart paper and try to group into issues/areas of concern
- Put the flip charts up and, working as one group, try to identify common time management issues
- Draw up a list identifying the common time management issues, and discuss ways of overcoming the problems identified.

3.2 Team management

- Working individually, identify the most important features of team management and write them onto individual 'post-it' notes
- Form into groups and collectively identify seven priority features
- Identify how many of these features are evident in your organisation
- For each of the seven priority features, suggest ways of improving team management in your organisation.

3.3 The final project report

- The list below includes some headings you may wish to include in your final report. Add any that you think are relevant to projects with which you have been involved. Try to identify the headings that represent priority areas, and allocate time to the completion of each stage.

project summary
project team and steering group membership
initial aims and objectives
expected outcomes
budget and time allocation
actual outcomes
problems and issues encountered during the project
solutions
transferable models of good practice
way forward
feedback and evaluation
conclusion
recommendations.

Practical exercises | Chapter 4

4.1 Advantages and disadvantages of project management software

- Make a list identifying the advantages and disadvantages of using project management software.

4.2 Project management software cost/benefit analysis

- Using the list developed in Practical 4.1, identify the costs involved with the use of project management software, and any benefits/savings to the institution.

Further information

References

HEFCE (1998) *Information systems and technology management value for money study: management review guide*. HEFCE (available from *www.hefce.ac.uk*)

HEFCE (1998) *Information systems and technology management value for money study: national report*. HEFCE (available from *www.hefce.ac.uk*)

Kliem RL (1998) *Project management practitioner's handbook*. Amacom

Lake C (1997) *Mastering project management: key skills in ensuring profitable and successful projects*. Thorogood

Lewis JP (1997) *Fundamentals of project management*. Amacom

Lock D (1996) *The essentials of project management*. Gower

Lockitt WG (1999) *Right tools for the job*. FEDA

Bibliography

Burton C, Michael N (1992) *A practical guide to project management: how to make it work in your organisation*. Kogan Page

Field M, Keller L (1997) *Project management*. Open University

Lock D (1996) *Project management, 6th edition*. Ashgate

Meredith JR, Mantel SJ (1999) *Project management: a managerial approach, 4th edition*. John Wiley and Sons

Nickson D (1998) *Managing projects*. Made Simple Books

Taylor J (1998) *A survival guide for project managers*. American Management Association

Turner JR (1997) *The handbook of project based management*. McGraw-Hill

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Education and training organisations are being used increasingly as a testing ground for large and complex projects. Whether they concern learning in the workplace new technology or innovative support mechanisms, such projects affect the normal operation of the organisation. *Practical project management* provides a succinct guide to effective management procedures including whether and how to take on projects, estimation of costs prior to project bids, project management tools; case studies, and practical exercises for staff development activities.

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